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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,360

08/21/2003

Robert Winston Nowlin

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7470

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11/30/2005

Paul F. Wille
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EXAMINER

HAROON, ADEEL

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/645,360	Applicant(s) NOWLIN ET AL.	
	Examiner Adeel Haroon	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchino et al. (U.S. 2003/0063662).

With respect to claim 1, Uchino et al. discloses a method for providing a comfort noise signal. Uchino et al. discloses generating a white noise signal (Paragraph 114). Uchino et al. also discloses filtering the white noise signal in a filter bank to produce a comfort noise signal and selectively coupling the comfort noise to the channel (Paragraphs 115-147).

With respect to claim 2, Uchino et al. also discloses coupling a white noise signal through a first and second multipliers, element number 55, to the low pass and high pass input of a QMF bank respectively in figures 23 and 24 (Paragraphs 456-457, 472). Uchino et al. further discloses controlling the gain of the multipliers, element number 54, with the magnitude of the sub-band analysis where the first sub-band has a lower frequency than the second sub-band (Paragraphs 456-457).

With respect to claim 6, Uchino et al. discloses a cellular telephone including a comfort noise generator. A cellular telephone inherently has an antenna, an RF stage, and a signal processing stage. Uchino et al. discloses a white noise generator, element number 25 (Paragraph 114). Uchino et al. also discloses coupling the white noise signal through a first and second multipliers, element number 55, to the low pass and high pass input of a QMF bank respectively in figures 23 and 24 (Paragraphs 456-457, 472). Uchino et al. further discloses controlling the gain of the multipliers, element number 54, with the magnitude of the sub-band analysis (Paragraphs 456-457). Uchino et al. further discloses means for selectively coupling the comfort noise to the channel (Paragraphs 115-147).

With respect to claim 7, Uchino et al. further discloses n sub-bands with no more than $(n-1)$ QMF banks, element number 57, that are upwardly cascaded in figure 27 (Paragraph 472).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino et al. (U.S. 2003/0063662).

With respect to claim 3, Uchino et al.'s method is described above in the discussion of claims 1 and 2. Uchino et al. does not expressly disclose combining the output signals from two or more of the sub-band filters. However, this combination results only in a wider bandwidth sub-band filter, which controls the multiplier's magnitude. Since Uchino et al. teaches that the bandwidth of the sub-band filters as a range (Paragraph 442), it would be obvious to one of ordinary skill in the art at the time of the applicant's invention, to combine the outputs of the sub-band filters resulting in a

Art Unit: 2685

wider bandwidth sub-band filter in order to have a wider bandwidth for the sub-band filter.

With respect to claims 4 and 5, Uchino et al. further discloses n sub-bands with no more than $(n-1)$ QMF banks, element number 57, that are upwardly cascaded to increase the low frequency resolution of the comfort noise in figure 27 (Paragraph 472).

With respect to claim 8, Uchino et al.'s method is described above in the discussion of claim 6. Uchino et al. does not expressly disclose combining the output signals from two or more of the sub-band filters. However, this combination results only in a wider bandwidth sub-band filter, which controls the multiplier's magnitude. Since Uchino et al. teaches that the bandwidth of the sub-band filters as a range (Paragraph 442), it would be obvious to one of ordinary skill in the art at the time of the applicant's invention, to combine the outputs of the sub-band filters resulting in a wider bandwidth sub-band filter in order to have a wider bandwidth for the sub-band filter.

With respect to claim 9, Uchino et al. further discloses n sub-bands with no more than $(n-1)$ QMF banks, element number 57, that are upwardly cascaded in figure 27 (Paragraph 472).

With respect to claim 10, Uchino et al. does not expressly disclose the number of the QMF banks is $(n/2 - 1)$. However, since the summation of the sub-bands filters only resulted in a wider sub-band filter, the combination is treated as one sub-band filter. Therefore, the expression $(n/2-1)$ is interpreted as one less QMF bank than the number of sub-band filter, which Uchino et al. teaches in figure 27 (Paragraph 472).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ariyama (U.S. 6,625,284) discloses a comfort noise generator using signal level analysis. Jarvinen et al. (U.S. 5,960,389) discloses a method for producing a comfort noise signal during discontinuous transmissions. Yip (U.S. 6,708,024) discloses a method and apparatus for producing a comfort signal. Nayak (U.S. 2003/0123535) discloses generating comfort noise using a filtering technique.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adeel Haroon whose telephone number is (571) 272-7405. The examiner can normally be reached on Monday thru Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2685

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/21/05



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